Work Order ID   114033

Monday, March 03, 2014 11:02:58 AM

114033   bFK   Page 1

Item ID:	D3447-9	D3447-9	**Accept** ***N900040100***
Revision ID:		B 114033	
Item Name:	Swing Arm		

Setup Start ***NS1***
Stop ***NS2***

Start Date:	3/3/2014	**Start Qty:** 18.00 ***18***	
Required Date: 3/14/2014		**Req'd Qty:** 18.00 ***18***	**Cust Item ID:**
Reference:			**Customer:**

Run Start ***NR1***

Approvals: Process Plan: _MF_   Date: _14-3-3_   Tooling: _____ Date: _____

QC: _____ Date: _____   SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	**Revision Nbr**								
D3447	Rev A								
100 ***100*** Bandsaw Jeaspa Bandsaw	BAND SAW Memo Cut blanks: 1.500" x 1.500" x 8.400" long	0.00 0.00	b.a 14/03/09			18	∅		DAS 08 9-89
110 ***110*** HAAS 1 HAAS CNC vertical machine #1	HAAS CNC VERTICAL MACHINING #1 Memo Machine as per Folio FA544 and Dwg B67-43001Identify as D3447-9Dwg Rev _B_ Folio Rev _AA_ Deburr	0.00 0.00	b.a 14/03/09			18	∅		DAS 08 9-89
120 ***120*** QC Quality Control	QC2- Inspect parts off machine FAI/FAIB Memo	0.00 0.00	b.a 14/03/09			18	∅		DAS 08 9-89

DQA: _____   Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

DART AEROSPACE

QA Closed: _____   Date: _____   Work Order update only ☐

Work Order: _____

Part No. _____

NCR No. _____

DISPOSITION

Rework ☐
Scrap ☐
Use-as-is ☐
Suspected Unapproved ☐

AGAINST DEPARTMENT/PROCESS

Skid-tube ☐	Crosstube ☐	Water Jet ☐ Engineering ☐
Machining ☐	Small Fab ☐	Prod. Eng. Coor. ☐ Quality ☐
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐ Other ☐
Large Fab ☐	Composite ☐	Supplier ☐

Root Cause		Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design	☐									
Doc/Data	☐									
Equip/Tooling	☐									
Handling/Pre	☐									
Material	☐									
Operator	☐									
Offset/Setup	☐									
Process	☐									
Supplier	☐									
Training	☐									
Transport	☐									
Unapproved	☐									

FAULT CATEGORY

Landing Gear

☐ Bending
☐ Centre Not Concentric
☐ Cracks
☐ Crimp/Kink/Ripple/Wave
☐ Cuffs
☐ Crushing
☐ Heat Treat
☐ Inspection Strip in Tube
☐ Marks/Chatter
☐ Turning Sequence
☐ Wave/Twist in Tube

General

☐ Bend
☐ BOM/Route
☐ Broken/Damage/Defect
☐ Burrs
☐ Contamination
☐ Countersink
☐ Cut Too Short
☐ Drawing
☐ Drill Holes
☐ Finish
☐ Fit/Function

☐ Folio/Program
☐ Grain
☐ Hardware
☐ Inspection Incomplete/Unqualified
☐ Instructions Incomplete/Unclear
☐ Misaligned/off center
☐ Mislabeled
☐ Misread
☐ Off-set
☐ Out of Calibration
☐ Out of Sequence

☐ Outside Dimensions
☐ Over/Under tolerance
☐ Part Incorrect
☐ Part Lost/Missing
☐ Part Moved
☐ Positioned Wrong
☐ Power Loss/Surge

☐ Pressure/Forced
☐ Set-up
☐ Temperature/Cure
☐ Weld
☐ Wrong Stock Pulled

☐ Other
_____
_____
_____

Monday, March 03, 2014 11:02:58 AM

Item ID:	D3447-9			Accept	*N9000401nn*	Setup	Start	*NS1*
Revision ID:							Stop	*NS2*
Item Name:	Swing Arm							

Start Date:	3/3/2014	Start Qty:	18.00	*18*		Cust Item ID:		
Required Date:	3/14/2014	Req'd Qty:	18.00	*18*		Customer:		
Reference:								

Run Start *NR1*

Approvals:	Process Plan: _____	Date: _____	Tooling: _____	Date: _____
	QC: _____	Date: _____	SPC (Y/N): _____	Date: _____

Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130 *130* QC Quality Control	QC8- Inspect parts - second check Memo	0.00 0.00	14-3-11			18	∅		
140 *140* HandFinish Hand Finishing	Chemical Conversion Coat per QSI005 4.1 Memo	0.00 0.00				18	143-12		
150 *150* Powdercoat Powder Coating	Green Sandtex(Ref:4.3.5.8) per QSI005 4.3 M 128 277 Memo	0.00 0.00				18. ∅	143-20.		

Mask inside holes as per Dwg D3447 prior to paintingSTART TIME: 3.20 OVEN TEMPERATURE: 30° FINISH TIME: 3.50

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

DART AEROSPACE

QA Closed: _____ Date: _____   Work Order update only ☐

Work Order: _____	**DISPOSITION**	**AGAINST DEPARTMENT/PROCESS**			
Part No. _____	Rework ☐	Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐
	Scrap ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coor. ☐	Quality ☐
	Use-as-is ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐
NCR No. _____	Suspected Unapproved ☐	Large Fab ☐	Composite ☐	Supplier ☐	

Root Cause		Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design	☐									
Doc/Data	☐									
Equip/Tooling	☐									
Handling/Pre	☐									
Material	☐									
Operator	☐									
Offset/Setup	☐									
Process	☐									
Supplier	☐									
Training	☐									
Transport	☐									
Unapproved	☐									

FAULT CATEGORY

Landing Gear

☐ Bending
☐ Centre Not Concentric
☐ Cracks
☐ Crimp/Kink/Ripple/Wave
☐ Cuffs
☐ Crushing
☐ Heat Treat
☐ Inspection Strip in Tube
☐ Marks/Chatter
☐ Turning Sequence
☐ Wave/Twist in Tube

General

☐ Bend
☐ BOM/Route
☐ Broken/Damage/Defect
☐ Burrs
☐ Contamination
☐ Countersink
☐ Cut Too Short
☐ Drawing
☐ Drill Holes
☐ Finish
☐ Fit/Function

☐ Folio/Program
☐ Grain
☐ Hardware
☐ Inspection Incomplete/Unqualified
☐ Instructions Incomplete/Unclear
☐ Misaligned/off center
☐ Mislabeled
☐ Misread
☐ Off-set
☐ Out of Calibration
☐ Out of Sequence

☐ Outside Dimensions
☐ Over/Under tolerance
☐ Part Incorrect
☐ Part Lost/Missing
☐ Part Moved
☐ Positioned Wrong
☐ Power Loss/Surge

☐ Pressure/Forced
☐ Set-up
☐ Temperature/Cure
☐ Weld
☐ Wrong Stock Pulled

☐ Other

_____
_____
_____

H:/FORMS/Quality Assurance\approved QA/NCRWO RevH

Item ID: D3447-9	Accept ***N900040100*** Setup Start ***NS1***
Revision ID:	Stop ***NS2***
Item Name: Swing Arm	

Start Date: 3/3/2014   **Start Qty:** 18.00   ***18***   **Cust Item ID:**

Required Date: 3/14/2014   **Req'd Qty:** 18.00   ***18***   **Customer:**

Reference:

Approvals: Process Plan: _____ Date: _____   Tooling: _____ Date: _____   Run   Start ***NR1***

QC: _____ Date: _____   SPC (Y/N): _____ Date: _____   Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160 ***160*** QC Quality Control	QC3- Inspect Part Finish Memo	0.00 ᴰᴬˢ 27 9-89 0.00 13/3/21				18			
170 ***170*** Packaging Packaging	Identify as per dwg & Stock Location: *Mezz. 2* Memo	0.00 0.00				18x ᴰᴬˢ 28 9-89 14-03-21			
180 ***180*** QC Quality Control	QC21- Final Inspection - Work Order Release Memo	0.00 0.00				MLJ 14-03-24 MLJ 14-03-24			

DQA: _____ Date: _____

DART AEROSPACE

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____   Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	**DISPOSITION**	**AGAINST DEPARTMENT/PROCESS**

DISPOSITION

Rework ☐
Scrap ☐
Use-as-is ☐
Suspected Unapproved ☐

AGAINST DEPARTMENT/PROCESS

Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐
Machining ☐	Small Fab ☐	Prod. Eng. Coor. ☐	Quality ☐
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐
Large Fab ☐	Composite ☐	Supplier ☐	

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design ☐									
Doc/Data ☐									
Equip/Tooling ☐									
Handling/Pre ☐									
Material ☐									
Operator ☐									
Offset/Setup ☐									
Process ☐									
Supplier ☐									
Training ☐									
Transport ☐									
Unapproved ☐									

FAULT CATEGORY

Landing Gear

☐ Bending
☐ Centre Not Concentric
☐ Cracks
☐ Crimp/Kink/Ripple/Wave
☐ Cuffs
☐ Crushing
☐ Heat Treat
☐ Inspection Strip in Tube
☐ Marks/Chatter
☐ Turning Sequence
☐ Wave/Twist in Tube

General

☐ Bend
☐ BOM/Route
☐ Broken/Damage/Defect
☐ Burrs
☐ Contamination
☐ Countersink
☐ Cut Too Short
☐ Drawing
☐ Drill Holes
☐ Finish
☐ Fit/Function

☐ Folio/Program
☐ Grain
☐ Hardware
☐ Inspection Incomplete/Unqualified
☐ Instructions Incomplete/Unclear
☐ Misaligned/off center
☐ Mislabeled
☐ Misread
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☐ Out of Calibration
☐ Out of Sequence

☐ Outside Dimensions
☐ Over/Under tolerance
☐ Part Incorrect
☐ Part Lost/Missing
☐ Part Moved
☐ Positioned Wrong
☐ Power Loss/Surge

☐ Pressure/Forced
☐ Set-up
☐ Temperature/Cure
☐ Weld
☐ Wrong Stock Pulled

☐ Other

_____
_____
_____

Work Order ID: 114033

Parent Item: D3447-9

Parent Item Name: Swing Arm

114033

D3447-9

Start Date: 3/3/2014   Required Date: 3/14/2014

Start Qty: 18.00   Required Qty: 18.00

Comments: IPP   A05.08.26New issueKJ/JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M7075T6B1.500X1.500		Purchased	No			100	f	31.7000	0.7	14			

M7075T6B1.500X1.500

7075 T6 BAR 1.500 x 1.500

**   D.e   14/03/09

Location	Loc Qty	Loc Code
MAT008	31.7	
123610	0.5	
M127992	31.2	

12.700 ft

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

DART AEROSPACE

QA Closed: _____ Date: _____   Work Order update only ☐

Work Order: _____
Part No. _____
NCR No. _____

DISPOSITION

Rework ☐
Scrap ☐
Use-as-is ☐
Suspected Unapproved ☐

AGAINST DEPARTMENT/PROCESS

Skid-tube ☐	Crosstube ☐	Water Jet ☐ Engineering ☐
Machining ☐	Small Fab ☐	Prod. Eng. Coor. ☐ Quality ☐
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐ Other ☐
Large Fab ☐	Composite ☐	Supplier ☐

Root Cause		Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design	☐									
Doc/Data	☐									
Equip/Tooling	☐									
Handling/Pre	☐									
Material	☐									
Operator	☐									
Offset/Setup	☐									
Process	☐									
Supplier	☐									
Training	☐									
Transport	☐									
Unapproved	☐									

FAULT CATEGORY

Landing Gear
- ☐ Bending
- ☐ Centre Not Concentric
- ☐ Cracks
- ☐ Crimp/Kink/Ripple/Wave
- ☐ Cuffs
- ☐ Crushing
- ☐ Heat Treat
- ☐ Inspection Strip in Tube
- ☐ Marks/Chatter
- ☐ Turning Sequence
- ☐ Wave/Twist in Tube

General
- ☐ Bend
- ☐ BOM/Route
- ☐ Broken/Damage/Defect
- ☐ Burrs
- ☐ Contamination
- ☐ Countersink
- ☐ Cut Too Short
- ☐ Drawing
- ☐ Drill Holes
- ☐ Finish
- ☐ Fit/Function

- ☐ Folio/Program
- ☐ Grain
- ☐ Hardware
- ☐ Inspection Incomplete/Unqualified
- ☐ Instructions Incomplete/Unclear
- ☐ Misaligned/off center
- ☐ Mislabeled
- ☐ Misread
- ☐ Off-set
- ☐ Out of Calibration
- ☐ Out of Sequence

- ☐ Outside Dimensions
- ☐ Over/Under tolerance
- ☐ Part Incorrect
- ☐ Part Lost/Missing
- ☐ Part Moved
- ☐ Positioned Wrong
- ☐ Power Loss/Surge

- ☐ Pressure/Forced
- ☐ Set-up
- ☐ Temperature/Cure
- ☐ Weld
- ☐ Wrong Stock Pulled
- ☐ Other

_____
_____
_____

DESIGN	DRAWN BY	**DART AEROSPACE LTD**	
CHECKED	APPROVED	HAWKESBURY, ONTARIO, CANADA	
		DRAWING NO. D3447	REV. A
			SHEET 4 OF 4
DATE 05.07.19		TITLE BLADE FOLD KIT PARTS	SCALE 1:2

DART

RELEASED
05/08/18

8.02

0.470

7.075

0.375

0.75

Ø0.375 THRU (2 PLACES) ⚠3

R0.38 (2 PLACES)

0.178 (2 PLACES)

164°

0.250

0.25

1.100   0.71   0.350

0.25

3.700

1.825

R0.25 (2 PLACES)

2.375 (2 PLACES)

R0.13 (4 PLACES)

114033 MF
14-3-3
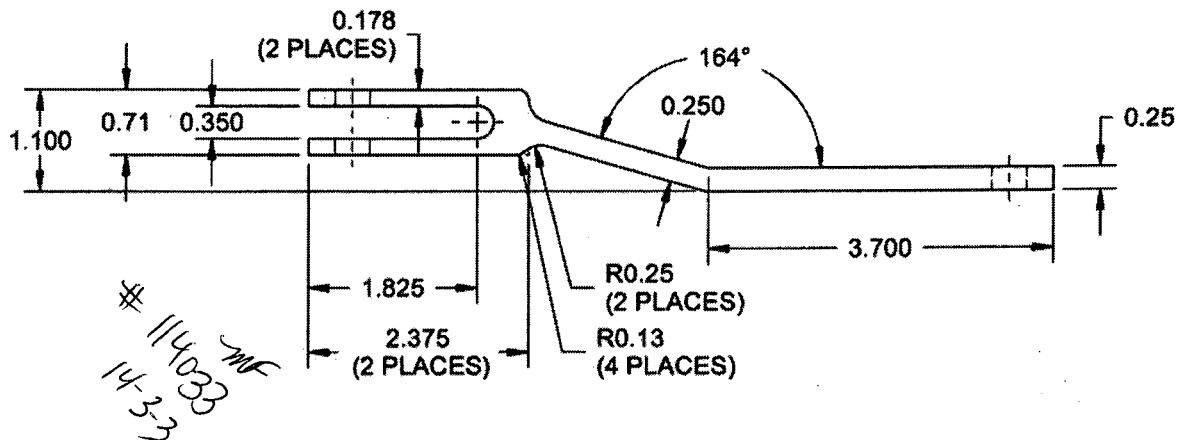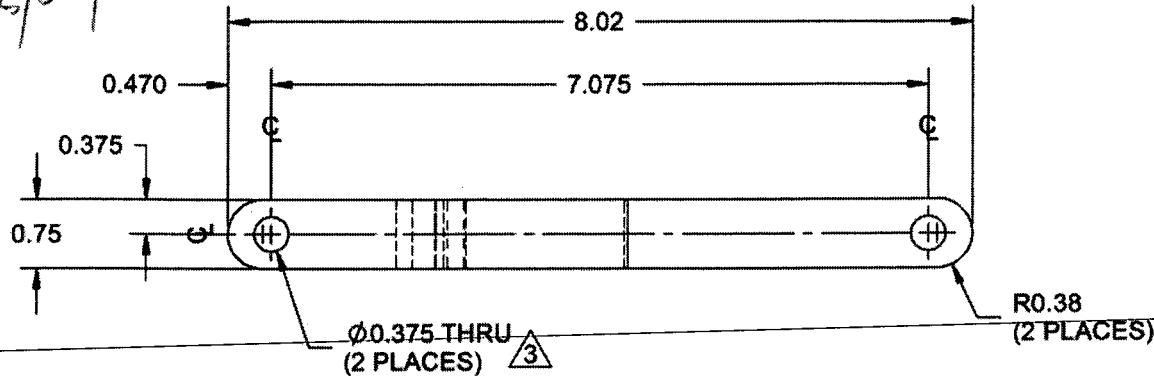
D3447-9 SWING ARM
SUPERSEDES PREMIER P/N B67-43001-263

NOTES:
1) MATERIAL: 6061-T6 (OR 6061-T651/T6510/T6511/T652) ROUND BAR
    PER AMS-QQ-A-225/8 (OR AMS 4117/4128/4115/4116) OR
    PER AMS-QQ-A-200/8 (OR AMS 4160)
    (REF. DART SPEC. M6061T6B)
2) CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
3) COVER INSIDE HOLES PRIOR PAINTING
4) FINISH: POWDER COAT PAINT GREEN SANDTEX (4.3.5.8) PER DART QSI 005 4.3
5) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
6) ALL DIMENSIONS ARE IN INCHES
7) BREAK ALL SHARP EDGES 0.005 TO 0.010

WORK ORDER NON-CONFORMANCE / UPDATE

DART AEROSPACE

Work Order update only ☐

Work Order: _____	**DISPOSITION**		**AGAINST DEPARTMENT/PROCESS**				
Part No. _____	Rework ☐	Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐		
	Scrap ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coor. ☐	Quality ☐		
NCR No. _____	Use-as-is ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐		
	Suspected Unapproved ☐	Large Fab ☐	Composite ☐	Supplier ☐			

Root Cause		Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design	☐									
Doc/Data	☐									
Equip/Tooling	☐									
Handling/Pre	☐									
Material	☐									
Operator	☐									
Offset/Setup	☐									
Process	☐									
Supplier	☐									
Training	☐									
Transport	☐									
Unapproved	☐									

FAULT CATEGORY

Landing Gear

☐ Bending
☐ Centre Not Concentric
☐ Cracks
☐ Crimp/Kink/Ripple/Wave
☐ Cuffs
☐ Crushing
☐ Heat Treat
☐ Inspection Strip in Tube
☐ Marks/Chatter
☐ Turning Sequence
☐ Wave/Twist in Tube

General

☐ Bend
☐ BOM/Route
☐ Broken/Damage/Defect
☐ Burrs
☐ Contamination
☐ Countersink
☐ Cut Too Short
☐ Drawing
☐ Drill Holes
☐ Finish
☐ Fit/Function

☐ Folio/Program
☐ Grain
☐ Hardware
☐ Inspection Incomplete/Unqualified
☐ Instructions Incomplete/Unclear
☐ Misaligned/off center
☐ Mislabeled
☐ Misread
☐ Off-set
☐ Out of Calibration
☐ Out of Sequence

☐ Outside Dimensions
☐ Over/Under tolerance
☐ Part Incorrect
☐ Part Lost/Missing
☐ Part Moved
☐ Positioned Wrong
☐ Power Loss/Surge

☐ Pressure/Forced
☐ Set-up
☐ Temperature/Cure
☐ Weld
☐ Wrong Stock Pulled

☐ Other

_____
_____
_____

DART AEROSPACE LTD		Work Order:	*W4033*
Description: Swing Arm		Part Number:	D3447-9
Inspection Dwg: D3447 Rev: A			Page 1 of 1

FIRST ARTICLE INSPECTION CHECKLIST

[X] **First Article**   [ ] **Prototype**

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
8.02	+/-0.030	8.020	✓		H-6	31006
7.075	+/-0.005	7.075	✓		''	''
R0.38	+/-0.030	R0.375	✓		R-6	ref.
Ø0.375	+0.006/-0.001	Ø0.375	✓		Vern	6A-01
0.75	+/-0.030	0.751	✓		''	''
0.375	+/-0.005	0.375	✓		''	''
0.470	+/-0.005	0.472	✓		H-6	31006
1.100	+/-0.010	1.105	✓		''	''
0.71	+/-0.030	0.706	✓		Vern	6A-01
0.178	+/-0.010	0.177	✓		''	''
1.825	+/-0.010	1.823	✓		H-6	31006
2.375	+/-0.010	2.375	✓		Vern	6A-01
R0.25	+/-0.030	R0.250	✓		R-6	ref.
R0.13	+/-0.030	R0.125	✓		''	''
3.700	+/-0.010	3.700	✓		Vern	6A-01
0.25	+/-0.030	0.251	✓		''	''

Measured by:	A. P DAS 06 9-89	Audited by:	(signature)	Prototype Approval:	N/A
Date:	14/03/09	Date:	14-3-11	Date:	N/A

Rev	Date	Change		Revised by	Approved
A	08.07.24	New Issue		KJ/DD	

H:\FORMS\Quality Assurance\approved QA\FAI revD

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

DART AEROSPACE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____		
Part No. _____		
NCR No. _____		

DISPOSITION

Rework	☐
Scrap	☐
Use-as-is	☐
Suspected Unapproved	☐

AGAINST DEPARTMENT/PROCESS

Skid-tube ☐	Crosstube ☐	Water Jet ☐	Engineering ☐
Machining ☐	Small Fab ☐	Prod. Eng. Coor. ☐	Quality ☐
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐
Large Fab ☐	Composite ☐	Supplier ☐	☐

Root Cause		Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design	☐									
Doc/Data	☐									
Equip/Tooling	☐									
Handling/Pre	☐									
Material	☐									
Operator	☐									
Offset/Setup	☐									
Process	☐									
Supplier	☐									
Training	☐									
Transport	☐									
Unapproved	☐									

FAULT CATEGORY

Landing Gear

☐	Bending
☐	Centre Not Concentric
☐	Cracks
☐	Crimp/Kink/Ripple/Wave
☐	Cuffs
☐	Crushing
☐	Heat Treat
☐	Inspection Strip in Tube
☐	Marks/Chatter
☐	Turning Sequence
☐	Wave/Twist in Tube

General

☐	Bend
☐	BOM/Route
☐	Broken/Damage/Defect
☐	Burrs
☐	Contamination
☐	Countersink
☐	Cut Too Short
☐	Drawing
☐	Drill Holes
☐	Finish
☐	Fit/Function

☐	Folio/Program
☐	Grain
☐	Hardware
☐	Inspection Incomplete/Unqualified
☐	Instructions Incomplete/Unclear
☐	Misaligned/off center
☐	Mislabeled
☐	Misread
☐	Off-set
☐	Out of Calibration
☐	Out of Sequence

☐	Outside Dimensions
☐	Over/Under tolerance
☐	Part Incorrect
☐	Part Lost/Missing
☐	Part Moved
☐	Positioned Wrong
☐	Power Loss/Surge

☐	Pressure/Forced
☐	Set-up
☐	Temperature/Cure
☐	Weld
☐	Wrong Stock Pulled
☐	Other

_____
_____